```
=> file hcaplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.63       0.63

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FILE COVERS 1907 - 13 Dec 2007  VOL 147 ISS 25
FILE LAST UPDATED: 12 Dec 2007  (20071212/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> s beta-glucan

     1497468 BETA
       15519 GLUCAN
L1      4858 BETA-GLUCAN
             (BETA(W)GLUCAN)

=> s barley

L2       52773 BARLEY

=> s cancer or tumor or neoplas?

        340008 CANCER
        432593 TUMOR
        521334 NEOPLAS?
L3      796708 CANCER OR TUMOR OR NEOPLAS?

=> s l1 and l2 and l3

L4          17 L1 AND L2 AND L3

=> s l4 and (PY<2002 or AY<2002 or PRY<2002)

      21937267 PY<2002
       4193776 AY<2002
       3670851 PRY<2002
L5           5 L4 AND (PY<2002 OR AY<2002 OR PRY<2002)

=> file stnguide

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         2.60       3.23
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FILE 'STNGUIDE' ENTERED AT 08:50:18 ON 13 DEC 2007
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Dec 7, 2007 (20071207/UP).

=> d l5 1-5 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L5 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI The potential of hull-less barley
AB A review with 124 refs. Hull-less barley (HB) has been investigated in many countries for use in feed, food, and industry since the publication of the last review in 1986. Literature published since 1990 on various aspects of HB utilization, other than in monogastric feeds, has been reviewed. Several HB cultivars containing low or high .beta.-glucan, low or high extract viscosity, and waxy (0-5% amylose) or normal starch are now available. Interest in HB utilization in the food industry developed largely due to its high β-glucan content, particularly in the waxy cultivars. .beta.-Glucan is a major component of soluble fiber implicated in hypocholesterolemia, hypoglycemia, and in reducing incidence of chemical induced colon cancer in exptl. animals. However, large-scale clin. trials using human subjects are needed to corroborate these effects. The zero amylose HB starch had low syneresis or a high freeze-thaw stability suitable for use in frozen foods. Single- or double-modified waxy HB starch may replace corn starch in some food applications, and cationized HB starch can replace corn and potato starches in the pulp and paper industry. HB may be milled using conventional wheat milling equipment to yield bran and flour for multiple food uses. Hull-less barley may also be used as feed stock for fuel alc. production, for the preparation of food malt with low or high enzyme activities, and for brewer's and distiller's malts.
AN 1999:636767 HCAPLUS <<LOGINID::20071213>>
DN 131:335948
TI The potential of hull-less barley
AU Bhatty, R. S.
CS Crop Development Centre, Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, S7N 5A8, Can.
SO Cereal Chemistry (1999), 76(5), 589-599
CODEN: CECHAF; ISSN: 0009-0352
PB American Association of Cereal Chemists
DT Journal; General Review
LA English
RE.CNT 124 THERE ARE 124 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI The β-glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells
AB Mouse leukocyte CR3 (Mac-1, αMβ2 integrin) was shown to function as a receptor for β-glucans in the same way as human CR3. Soluble zymosan polysaccharide (SZP) or pure β-glucans labeled with FITC or 125I bound in a saturable and reversible manner to neutrophils, macrophages, and NK cells. This lectin activity was blocked by anti-CD11b mAb M1/70 or 5C6 and did not occur with leukocytes from CR3-/- (CD11b-deficient) mice. SZP prepns. containing primarily mannose or glucose bound to CR3, and the binding of 125I-labeled β-glucan to CR3 was competitively inhibited by β-glucans from

barley or seaweed, but not by yeast α-mannan. Also, as with human CR3, the lectin site of mouse CR3 was inhibited by α- or β-methylglucoside (but not D-glucose), α- or β-methylmannoside, and N-acetyl-D-glucosamine. Phagocytosis of zymosan and serum-opsonized zymosan was partially inhibited by anti-CR3 and was reduced to <40% of normal with leukocytes from CR3-/- mice. As with neutrophils from patients with CD18 deficiency, neutrophils from CR3-/- mice exhibited no phagocytosis of particulate β -glucan. SZP or β-glucans primed CR3 of neutrophils, macrophages, and NK cells for cytotoxicity of iC3b-opsonized tumor cells that otherwise did not trigger killing. β -Glucan priming for cytotoxicity was inhibited by anti-CR3 and did not occur with leukocytes from CR3-/- mice. The primed state of macrophage and NK cell CR3 remained detectable for 18 to 24 h after pulsing with β-glucans. The similarity of mouse and human CR3 in response to β-glucans highlights the utility of mouse tumor models for development of therapeutic β-glucans.

AN 1999:107663 HCAPLUS <<LOGINID::20071213>>
DN 130:280682
TI The β -glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells
AU Xia, Yu; Vetvicka, Viclav; Yan, Jun; Hanikyrova, Margareta; Mayadas, Tanya; Ross, Gordon D.
CS Division of Experimental Immunology and Immunopathology, Department of Pathology, and Department of Microbiology and Immunology, University of Louisville, Louisville, KY, 40292, USA
SO Journal of Immunology (1999), 162(4), 2281-2290
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Control of acidic gut syndrome with an agent controlling acid and endotoxin accumulation in the gastrointestinal tract
AB A method is provided for the treatment or prophylaxis of acidic gut syndrome resulting from the accumulation of acid and production of endotoxin in the gastrointestinal tract of a human or an animal, the accumulation resulting from the fermentation of carbohydrate in the gastrointestinal tract of the human or animal. The method comprises administering to said human or animal an effective amount of an active agent capable of preventing or controlling acid and endotoxin accumulation in the gastrointestinal tract.
AN 1999:42584 HCAPLUS <<LOGINID::20071213>>
DN 130:105323
TI Control of acidic gut syndrome with an agent controlling acid and endotoxin accumulation in the gastrointestinal tract
IN Rowe, James Baber
PA Australia
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9900136	A1	19990107	WO 1998-AU495	19980626 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,

NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
UA, UG, US, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, ML, MR, NE, SN, TD, TG

CA	2294904	A1	19990107	CA 1998-2294904	19980626 <--
AU	9880931	A	19990119	AU 1998-80931	19980626 <--
AU	746054	B2	20020411		
EP	1017402	A1	20000712	EP 1998-930541	19980626 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR	9810944	A	20000926	BR 1998-10944	19980626 <--
JP	2002511865	T	20020416	JP 1999-505159	19980626 <--
NZ	502445	A	20030328	NZ 1998-502445	19980626 <--
MX	200000064	A	20010123	MX 2000-64	20000103 <--
US	6303572	B1	20011016	US 2000-446801	20000210 <--
US	6468964	B1	20021022	US 2001-912886	20010725 <--
PRAI AU	1997-7582	A	19970627 <--		
WO	1998-AU495	W	19980626 <--		
US	2000-446801	A3	20000210 <--		

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Substrate available for colonic fermentation from oat, barley and wheat bread diets. A study in ileostomy subjects
AB Nutrients not absorbed in the small bowel will form substrates for microbial growth in the colon which may have implications for the development of colon cancer. The aim of the present study was to investigate whether fiber-rich oat and barley diets increase the excretion of energy-supplying nutrients from the small bowel compared with a low-fiber wheat diet, and whether a possible increase could be a low-fiber basal diet (12 g dietary fiber/d). The breads were based on either wheat flow (W diet, 7 g dietary fiber/d), oat bran (OB diet, 29 g dietary fiber/d), the same amount of oat brand with addition of β-glucanase (EC 3.2.1.4) (OBE diet, 19 g dietary fiber/d) or a fiber-rich barley fraction (B diet, 35 g dietary fiber/d). An increased ileal excretion of starch was observed with the barley diet but not effect of the oat β -glucan on starch recovery was found. The NSP + Klason lignin in the ileostomy effluents accounted only for 24, 31, 24 and 35% of the gross energy excretion in the W, OB, and B diet periods resp. A large part of the dry weight and energy (30, 21, 28, and 27%, in the W. OB, OBE and B diests resp.) in the effluents could not be identified as fat, protein, total starch or NSP + Klason lignin. This unidentified part was probably made up of oligosaccharides, endogenous losses and nutrient complexes. Methods for identifying and analyzing these components should be developed and their role as substrates for colonic fermentation and colon cancer development ought to be investigated.
AN 1997:57107 HCAPLUS <<LOGINID::20071213>>
DN 126:170835
TI Substrate available for colonic fermentation from oat, barley and wheat bread diets. A study in ileostomy subjects
AU Lia, Agot; Sundberg, Birgitta; Aaman, Per; Sanberg, Ann-Sofie; Hallmans, Goeran; Andersson, Henrik
CS Dep. Clinical Nutrition, Univ. Goeteborg, Goeteborg, Swed.
SO British Journal of Nutrition (1996), 76(6), 797-808
CODEN: BJNUAV; ISSN: 0007-1145
PB Cambridge University Press
DT Journal
LA English
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L5   ANSWER 5 OF 5  HCAPLUS  COPYRIGHT 2007 ACS on STN
TI   Insoluble dietary fiber-rich fractions from barley protect rats
     from intestinal cancers
AB   In a long-term experiment on rats (from weaning until 32 wks of age), dietary
     spent barley grain (from brewing) rich in insol. fiber (lignin
     and cellulose) was more protective against chemical induced intestinal
     cancer than wheat bran or barley bran rich in soluble fiber
     (β -glucan and arabinoxylan).
AN   1993:648800  HCAPLUS <<LOGINID::20071213>>
DN   119:248800
TI   Insoluble dietary fiber-rich fractions from barley protect rats
     from intestinal cancers
AU   McIntosh, G. H.; Jorgensen, L.; Royle, P.
CS   Div. Hum. Nutr., CSIRO, Adelaide, 5000, Australia
SO   Special Publication - Royal Society of Chemistry (1993),
     123(Food and Cancer Prevention:  Chemical and Biological Aspects), 362-3
     CODEN: SROCDO; ISSN: 0260-6291
DT   Journal
LA   English


=> d his

     (FILE 'HOME' ENTERED AT 08:48:27 ON 13 DEC 2007)

     FILE 'HCAPLUS' ENTERED AT 08:50:09 ON 13 DEC 2007
L1          4858 S BETA-GLUCAN
L2         52773 S BARLEY
L3        796708 S CANCER OR TUMOR OR NEOPLAS?
L4            17 S L1 AND L2 AND L3
L5             5 S L4 AND (PY<2002 OR AY<2002 OR PRY<2002)

     FILE 'STNGUIDE' ENTERED AT 08:50:18 ON 13 DEC 2007

     FILE 'HCAPLUS' ENTERED AT 08:50:25 ON 13 DEC 2007

     FILE 'STNGUIDE' ENTERED AT 08:50:25 ON 13 DEC 2007

=> loghold
LOGHOLD IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> log hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                  ENTRY    SESSION
FULL ESTIMATED COST                                0.06      20.10

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
                                                  ENTRY    SESSION
CA SUBSCRIBER PRICE                                0.00      -3.90

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 08:50:36 ON 13 DEC 2007

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:SSPTAEXO1623
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PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'STNGUIDE' AT 10:02:34 ON 13 DEC 2007
FILE 'STNGUIDE' ENTERED AT 10:02:34 ON 13 DEC 2007
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    0.06       20.10

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY     SESSION
CA SUBSCRIBER PRICE                                    0.00       -3.90

=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    0.06       20.10

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY     SESSION
CA SUBSCRIBER PRICE                                    0.00       -3.90

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
       AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
       CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
       DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 10:02:44 ON 13 DEC 2007

69 FILES IN THE FILE LIST IN STNINDEX

Enter SET DETAIL ON to see search term postings or to view
search error messages that display as 0* with SET DETAIL OFF.

=> s barley and (beta-glucan) and (cancer or tumor or neoplas?)
          1   FILE ADISCTI
          3   FILE AGRICOLA
         10   FILE BIOSIS
          2   FILE BIOTECHABS
          2   FILE BIOTECHDS
          2   FILE BIOTECHNO
          7   FILE CABA
         17   FILE CAPLUS
          3   FILE DDFU
  22 FILES SEARCHED...
          5   FILE DRUGU
          8   FILE EMBASE
  29 FILES SEARCHED...
          4   FILE ESBIOBASE
          9   FILE FROSTI
          4   FILE FSTA
          3   FILE IFIPAT
          1   FILE LIFESCI
          4   FILE MEDLINE
          1   FILE NTIS
          1   FILE NUTRACEUT
          3   FILE PASCAL
  50 FILES SEARCHED...
         15   FILE PROMT
         14   FILE SCISEARCH
         10   FILE TOXCENTER
        149   FILE USPATFULL
         25   FILE USPAT2
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          6   FILE WPIDS
          1   FILE WPIFV
          6   FILE WPINDEX

  28 FILES HAVE ONE OR MORE ANSWERS,    69 FILES SEARCHED IN STNINDEX

L6   QUE BARLEY AND (BETA-GLUCAN) AND (CANCER OR TUMOR OR NEOPLAS?)

=> file biosis embase scisearch
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    1.89       21.99

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY     SESSION
CA SUBSCRIBER PRICE                                    0.00       -3.90

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FILE 'SCISEARCH' ENTERED AT 10:04:15 ON 13 DEC 2007
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=> s barley and (beta-glucan) and (cancer or tumor or neoplas?)
L7          32 BARLEY AND (BETA-GLUCAN) AND (CANCER OR TUMOR OR NEOPLAS?)

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8          21 DUP REM L7 (11 DUPLICATES REMOVED)

=> s l8 not py>2001
L9           5 L8 NOT PY>2001

=> d l9 1-5 ti abs bib

L9   ANSWER 1 OF 5  BIOSIS  COPYRIGHT (c) 2007 The Thomson Corporation  on STN
TI   The potential of hull-less barley.
AB   Hull-less barley (HB) has been investigated in many countries
     for use in feed, food, and industry since the publication of the last
     review in 1986.  Literature published since 1990 on various aspects of HB
     utilization, other than in monogastric feeds, has been reviewed.  Several
     HB cultivars containing low or high beta-glucan, low
     or high extract viscosity, and waxy (0-5% amylose) or normal starch are
     now available.  Interest in HB utilization in the food industry developed
     largely due to its high beta-glucan content,
     particularly in the waxy cultivars. beta-Glucan is a
     major component of soluble fiber implicated in hypocholesterolemia,
     hypoglycemia, and in reducing incidence of chemically induced colon
     cancer in experimental animals.  However, large-scale clinical
     trials using human subjects are needed to corroborate these effects.  The
     zero amylose HB starch had low syneresis or a high freeze-thaw stability
     suitable for use in frozen foods.  Single- or double-modified waxy HB
     starch may replacecorn starch in some food applications, and cationized HB
     starch can replace corn and potato starches in the pulp and paper
     industry.  HB may be milled using conventional wheat milling equipment to
     yield bran and flour for multiple food uses.  Hull-less barley
     may also be used as a feed stock for fuel alcohol production, for the
     preparation of food malt with low or high enzyme activities, and for
     brewer's and distiller's malts.
AN   1999:496156  BIOSIS <<LOGINID::20071213>>
DN   PREV199900496156
```

TI The potential of hull-less barley.
AU Bhatty, R. S. [Reprint author]
CS Crop Development Centre, Department of Plant Sciences, University of Saskatchewan, 51 Campus Drive, Saskatoon, SK, S7N 5A8, Canada
SO Cereal Chemistry, (Sept.-Oct., 1999) Vol. 76, No. 5, pp. 589-599. print.
CODEN: CECHAF. ISSN: 0009-0352.
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 23 Nov 1999
Last Updated on STN: 23 Nov 1999

L9 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Substrates available for colonic fermentation from oat, barley and wheat bread diets: A study in ileostomy subjects.
AB Nutrients not absorbed in the small bowel will form substrates for microbial growth in the colon which may have implications for the development of colon cancer. The aim of the present study was to investigate whether fibre-rich oat and barley diets increase the excretion of energy-supplying nutrients from the small bowel compared with a low-fibre wheat diet, and whether a possible increase could be related to the beta-glucan content. Nine ileostomy subjects were served four types of bread together with a low-fibre basal diet (12 g dietary fibre/d). The breads were based on either wheat flour (W diet, 7 g dietary fibre/d), oat bran (OB diet, 29 g dietary fibre/d), the same amount of oat bran with addition of beta-glucanase (EC 3.2.1.4) (OBE diet, 19 g dietary fibre/d) or a fibre-rich barley fraction (B diet, 35 g dietary fibre/d). An increased ileal excretion of starch was observed with the barley diet but no effect of the oat beta-glucan on starch recovery was found. The NSP+Klason lignin in the ileostomy effluents accounted only for 24, 31, 24 and 35% of the gross energy excretion in the W, OB, OBE and B diet periods respectively. A large part of the dry weight and energy (30, 21, 28 and 27%, in the W, OB, OBE and B diets respectively) in the effluents could not be identified as fat, protein, total starch or NSP+Klason lignin. This unidentified part was probably made up of oligosaccharides, endogenous losses and nutrient complexes. Methods for identifying and analysing these components should be developed and their role as substrates for colonic fermentation and colon cancer development ought to be investigated.
AN 1997:109355 BIOSIS <<LOGINID::20071213>>
DN PREV199799408558
TI Substrates available for colonic fermentation from oat, barley and wheat bread diets: A study in ileostomy subjects.
AU Lia, Agot [Reprint author]; Sundberg, Birgitta; Aman, Per; Sandberg, Ann-Sofie; Hallmans, Goran; Andersson, Henrik [Reprint author]
CS Dep. Clin. Nutr., Univ. Goteborg, Goteborg, Sweden
SO British Journal of Nutrition, (1996) Vol. 76, No. 6, pp. 797-808.
CODEN: BJNUAV. ISSN: 0007-1145.
DT Article
LA English
ED Entered STN: 10 Mar 1997
Last Updated on STN: 10 Mar 1997

L9 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI GROWTH AND LIPID METABOLISM AS AFFECTED BY FEEDING OF HULL-LESS BARLEYS WITH AND WITHOUT SUPPLEMENTAL BETA GLUCANASE.
AB Three hull-less barleys, Washonupana (WSNP), Waxbar (WXB), and Bangsa (BGS), were fed to broiler chicks in 21% protein diets containing 0.5% cholesterol in replicate trials. A corn-based diet, with added cholesterol, served as a control. Alternative diets were supplemented with β-glucanase (ENZ). β -glucan content ranged from 4.9% to 6.1% and soluble dietary fiber (SDF) from 3.6% to 7.5% in the barleys. Data from the two trials were pooled for statistical

analysis by the SAS General Linear Models procedure. In body weight gain, chicks fed WSNP - ENZ were lower ($P < 0.05$) than all other treatments. The β-glucanase supplement to the WXB and BGS barley tended to improve gains, but the differences were not significant for either barley. Feed to gain ratios were lowest ($P < 0.0001$) for corn fed chicks and lower ($P < 0.05$ to $P < 0.0001$) for those fed barley +ENZ diets compared to barley -ENZ. Chicks fed barley diets had lower ($P < 0.05$) total serum cholesterol (TSC) and LDL-cholesterol than those fed corn diets, regardless of ENZ supplementation. For chicks on barley -ENZ diets, TSC levels for WSNP, WXB, and BGS were 146, 152, and 142 mg/dl respectively and for chicks on barley +ENZ diets, 218, 200, and 178 mg/dl. LDL-cholesterol levels followed the same trend and there was little difference in serum triglycerides. The BGS + ENZ lowered TSC 30% from the corn control compared to 10.7% and 18% for WSNP + ENZ and WXB + ENZ, suggesting additional hypocholesterolemic factors, possibly tocotrienol and SDF other than 1 → 3, 1 → 4 β-D-glucans.

AN 1992:6962 BIOSIS <<LOGINID::20071213>>
DN PREV199293006962; BA93:6962
TI GROWTH AND LIPID METABOLISM AS AFFECTED BY FEEDING OF HULL-LESS BARLEYS WITH AND WITHOUT SUPPLEMENTAL BETA GLUCANASE.
AU NEWMAN R K [Reprint author]; NEWMAN C W; HOFER P J; BARNES A E
CS DEP ANIMAL RANGE SCIENCES, MONTANA STATE UNIVERSITY, BOZEMAN MT 59717, USA
SO Plant Foods for Human Nutrition (Dordrecht), (1991) Vol. 41, No. 4, pp. 371-380.
CODEN: PFHNE8. ISSN: 0921-9668.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 10 Dec 1991
Last Updated on STN: 6 Mar 1992

L9 ANSWER 4 OF 5 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI The β -glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells.
AB Mouse leukocyte CR3 (Mac-1, α(M)β(2) integrin) was shown to function as a receptor for β-glucans in the same way as human CR3. Soluble zymosan polysaccharide (SZP) or pure β-glucans labeled with FITC or (125)I bound in a saturable and reversible manner to neutrophils, macrophages, and NK cells. This lectin activity was blocked by anti-CD11b mAb M1/70 or 5C6 and did not occur with leukocytes from CR3(-/-) (CD11b-deficient) mice. SZP preparations containing primarily mannose or glucose bound to CR3, and the binding of (125)I-labeled β -glucan to CR3 was competitively inhibited by β-glucans from barley or seaweed, but not by yeast α-mannan. Also, as with human CR3, the lectin site of mouse CR3 was inhibited by α- or β-methylglucoside (but not D-glucose), α- or β-methylmannoside, and N-acetyl-D-glucosamine. Phagocytosis of zymosan and serum-opsonized zymosan was partially inhibited by anti-CR3 and was reduced to <40% of normal with leukocytes from CR3(-/-) mice. As with neutrophils from patients with CD18 deficiency, neutrophils from CR3(-/-) mice exhibited no phagocytosis of particulate β -glucan. SZP or β-glucans primed CR3 of neutrophils, macrophages, and NK cells for cytotoxicity of iC3b-opsonized tumor cells that otherwise did not trigger killing. β -Glucan priming for cytotoxicity was inhibited by anti-CR3 and did not occur with leukocytes from CR3(-/-) mice. The primed state of macrophage and NK cell CR3 remained detectable for 18 to 24 h after pulsing with β- glucans. The similarity of mouse and human CR3 in response to β-glucans highlights the utility of mouse tumor models for development of therapeutic β-glucans.

AN 1999217794 EMBASE <<LOGINID::20071213>>
TI The β -glucan-binding lectin site of mouse CR3 (CD11b/CD18) and its function in generating a primed state of the receptor that mediates cytotoxic activation in response to iC3b-opsonized target cells.
AU Xia X.; Vetvicka V.; Yan J.; Hanikyrova M.; Mayadas T.; Ross G.D.
CS Dr. Y. Xia, Division of Experimental Immunology, Department of Pathology, University of Louisville, Louisville, KY 40292, United States. y0xia001@gwise.louisville.edu
SO Journal of Immunology, (15 Feb 1999) Vol. 162, No. 4, pp. 2281-2290. Refs: 83
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TI Molecular weight dependency on the production of the TNF stimulated by fractions of rye (1 -> 3),(1 -> 4)-beta-D-glucan
AB Mixed-linkage (1 -->3),(1 -->4)-beta -D-glucan with a weight average molecular weight varying between 79 800 and 13 900 was purified from rye. These fractions were used for stimulation of human monocytes to produce tumour necrosis factor (TNF). A mixed-linkage beta - glucan with a weight average molecular weight of 18 900 was found to be the most potent immunostimulator.
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GA The Genuine Article (R) Number: 383YD
TI Molecular weight dependency on the production of the TNF stimulated by fractions of rye (1 -> 3),(1 -> 4)-beta-D-glucan
AU Roubroeks J P (Reprint); Skjak-Braek G; Ryan L; Christensen B E
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CYA Sweden; Norway
SO SCANDINAVIAN JOURNAL OF IMMUNOLOGY, (DEC 2000) Vol. 52, No. 6, pp. 584-587.
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